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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,528	12/19/2003	Jim Recknagel	27475/05250	1527
24024 7590 08/21/2007 CALFEE HALTER & GRISWOLD, LLP 800 SUPERIOR AVENUE SUITE 1400 CLEVELAND, OH 44114			EXAMINER GALL, LLOYD A	
			ART UNIT 3676	PAPER NUMBER
			MAIL DATE 08/21/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/707,528

Applicant(s)

RECKNAGEL ET AL.

Examiner

Lloyd A. Gall

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 18-21 is/are allowed.
- 6) ☒ Claim(s) 1-12 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 4/3/2007.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim 5 is objected to because of the following informalities: In claim 5, lines 6-7, "in one of two insertion directions" is unclear as to whether or not this is claiming the shaft as insertable in two insertions directions in the lock body. Appropriate correction is required.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the hitch ball of claim 18, line 5 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5-7 are rejected under 35 U.S.C. 102(n) as being anticipated by Howard et al (710).

As seen in figs. 2 and 3, Howard teaches a coupler 30, a lock body 200 having a passage 204 to receive the shaft 106, and a locking mechanism 250. The shaft is capable of being inserted from top-to-bottom as seen in fig. 2, and is also capable of being inserted from the bottom-to-top direction of fig. 2. The shaft includes recesses 110, having vertical edges at the top and bottom of the recesses, and a tapered edge at the bottom of the recesses as seen in fig. 2.

Claims 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Byrd (620).

Byrd teaches a coupler defined by the cross-sectioned tubular member in fig. 1 within the shackle 1, the shackle 1 including at least one shaft having a plurality of recesses 9, a lock body 3, 4, a key-operated locking mechanism 5 within the lock body, wherein each shaft is capable of being inserted in two insertion directions into the lock body, as seen in figs. 1 and 2.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Byrd (620) in view of Maxwell (938).

Maxwell teaches shackle recesses having a vertical and a tapered edge. It would have been obvious to modify the recesses of Byrd to include a vertical and a tapered edge, in view of the teaching of Maxwell, the motivation being to allow the shackle to be inserted but not removed, as is well known.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Byrd (620) in view of Adamson (903).

Adamson teaches a locking mechanism 36, 38 including a cam 34 engaged at groove 40 by the portion 39 of the locking mechanism, and the cam 34 engageable with a locking plate 19 by projections 35. It would have been obvious to modify the locking mechanism 5 of Byrd to include a cam engaged by the locking mechanism, wherein the cam includes a projection engageable with a locking plate 6, 7 of Byrd, in view of the teaching of Adamson, the motivation being to ensure proper sliding motion of the locking plates 6, 7 of Byrd with rotation of the key.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Byrd in view of Adamson as applied to claim 9 above, and further in view of Yun (280).

As seen in fig. 13, Yun teaches a cam projection 75 engaging a notch 73, 74 in a locking plate 79, 80. It would have been obvious to modify the cam of Byrd as modified by Adamson to include a cam projection engageable with a notch in the locking plate, in view of the teaching of Yun, the motivation being to transfer torque from the key to sliding motion of the locking plate.

Claims 1, 3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell (938) in view of Byrd (620).

Maxwell teaches a lock body 1, a shackle 4 having a flanged end 8 to receive a coupler chain in hole 9, and a narrow tapered end of the shaft 4, a key-operated locking mechanism to control a sliding locking plate 2 which engages one of a plurality of recesses 3 in the shaft, the recesses having a vertical edge and a tapered edge. Byrd teaches a shaft inserted in two insertion directions into the locking body, as set forth above. It would have been obvious to modify the lock of Maxwell such that the shaft 4 can be inserted in two insertion directions into the lock body, in view of the teaching of Byrd, the motivation being to simplify installation of the shaft/shackle into either end of the lock body.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell in view of Byrd as applied to claim 1 above, and further in view of Lai (298).

Lai teaches a padlock of stainless steel as set forth in paragraph [0016], line 3. It would have been obvious to form the shaft and lock body of Maxwell of stainless steel, in view of the teaching of Lai, the motivation being to optimize its strength and corrosion resistance.

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Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell in view of Byrd as applied to claim 1 above, and further in view of Wah (100).

Wah teaches a shaft 16 movable into an insertion position without unlocking the locking mechanism 18. It would have been obvious to modify the lock of Maxwell such that the shaft 4 is insertable without unlocking the key lock, in view of the teaching of Wah, the motivation being to simplify insertion of the shaft into the lock body.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell in view of Byrd as applied to claim 5 above, and further in view of Adamson. Adamson teaches a locking mechanism 36, 38 including a cam 34 engaged at groove 40 by the portion 39 of the locking mechanism, and the cam 34 engageable with a locking plate 19 by projections 35. It would have been obvious to modify the locking mechanism of Maxwell as modified by Byrd to include a cam engaged by the locking mechanism, wherein the cam includes a projection engageable with a locking plate 2 of Maxwell, in view of the teaching of Adamson, the motivation being to ensure proper sliding motion of the locking plates 2 of Maxwell with rotation of the key.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell in view of Byrd and Adamson as applied to claim 9 above, and further in view of Yun (280).

As seen in fig. 13, Yun teaches a cam projection 75 engaging a notch 73, 74 in a locking plate 79, 80. It would have been obvious to modify the cam of Maxwell as modified by Byrd and Adamson to include a cam projection engageable with a notch in

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the locking plate, in view of the teaching of Yun, the motivation being to transfer torque from the key to sliding motion of the locking plate.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell in view of Byrd as applied to claim 6 above, and further in view of Leyden et al (258) or lu (092).

As seen in fig. 7, Leyden teaches a locking plate opening 102 with a peripheral edge passed through by a shaft 12. lu teaches a locking plate 200 opening 2000 with a peripheral edge passed through by a shaft 50. It would have been obvious to modify the locking plate(s) 2 of Maxwell to include an opening with a peripheral edge passed through by the shaft 4, 5, in view of the teaching of either Leyden et al or lu, the motivation being to optimize the surface area engagement between the locking plates and shaft, to provide a strong locking engagement between the lock body and shaft of Maxwell.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell in view of Byrd as applied to claim 6 above, and further in view of either Barnard (344) or Chen (914).

Barnard teaches a seal 22 around a lock body 12 to seal against a shaft 18a, 18b.

Chen teaches a seal 64 around a portion 62 of a lock body 6 to seal a shaft 52. It would have been obvious to provide a seal for the shaft of Maxwell, in view of the teaching of either Barnard or Chen, the motivation being to prevent moisture from entering into the lock body.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell in view of Byrd as applied to claim 6 above, and further in view of Leyden et al (258). Leyden teaches a protective coating 120 on a shaft as seen in fig. 6. It would have been obvious to provide a protective coating on the shaft(s) of Maxwell, in view of the teaching of Leyden et al, the motivation being to protect the shaft and adjacent objects engaged by the shaft from scratching.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell in view of Byrd and either Leyden et al (258) or Iu (092).

Maxwell teaches a lock body 1, a shackle 4 having a flanged end 8 to receive a coupler chain in hole 9, and a narrow tapered end of the shaft 4, a key-operated locking mechanism to control a sliding locking plate 2 which engages one of a plurality of recesses 3 in the shaft, the recesses having a vertical edge and a tapered edge. Byrd teaches a shaft inserted in two insertion directions into the locking body, as set forth above. As seen in fig. 7, Leyden teaches a locking plate opening 102 with a peripheral edge passed through by a shaft 12. Iu teaches a locking plate 200 opening 2000 with a peripheral edge passed through by a shaft 50. It would have been obvious to modify the lock of Maxwell such that the shaft 4 can be inserted in two insertion directions into the lock body, in view of the teaching of Byrd, the motivation being to simplify installation of the shaft/shackle into either end of the lock body. It would have been obvious to modify the locking plate(s) 2 of Maxwell to include an opening with a peripheral edge passed through by the shaft 4, 5, in view of the teaching of either Leyden et al or Iu, the motivation being to optimize the surface area engagement

between the locking plates and shaft, to provide a strong locking engagement between the lock body and shaft of Maxwell.

Applicant's arguments with respect to claims 1-12 and 15-17 have been considered but are moot in view of the new ground(s) of rejection.

Claims 18-21 are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

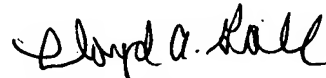
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lloyd A. Gall whose telephone number is 571-272-7056. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Lloyd A. Gall
Primary Examiner
Art Unit 3676

LG LG
August 16, 2007